

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO. 09/963,514
ATTORNEY DOCKET NO. Q66282

REMARKS

Applicant thanks the Patent Office for acknowledging Applicant's claim to foreign priority, and for indicating that the certified copy of the priority document, French Patent Application No. 00 12 511 dated October 2, 2000, has been made of record in the file.

Applicant thanks the Patent Office for initialing the references listed on the PTO-1449 form submitted with the Information Disclosure Statement filed on September 27, 2001, thereby confirming that the listed references have been considered.

Applicant herein amends the specification and the Abstract of the Disclosure. No new matter has been added. Entry of the amended Abstract and specification amendments is respectfully requested.

Claims 1-7 have been examined on their merits.

Applicant herein editorially amends claims 1, 3-5 and 7 to conform the claims to U.S. practice. The amendments to claims 1, 3-5 and 7 do not narrow the literal scope of the claims, were not made for reasons of patentability and thus do not implicate an estoppel in the application of the doctrine of equivalents.

The Patent Office objects to claims 3, 4, 6 and 7 as being dependent upon a rejected base claim. Applicant thanks the Patent Office for indicating that claims 3, 4, 6 and 7 would be allowed if rewritten in independent form. However, instead of rewriting claims 3, 4, 6 and 7 in independent form, Applicant respectfully traverses the prior art rejections for the reasons set forth below.

Claims 1-7 are all the claims presently pending in the application.

1. Claims 1, 2 and 5 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kirby (U.S. Patent No. 6,647,208). Applicant traverses the § 103(a) rejection of claims 1, 2 and 5 for at least the reasons discussed below.

The burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). To make its *prima facie* case of obviousness, the USPTO must satisfy three requirements:

- a) The prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the artisan to modify a reference or to combine references. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).
- b) The proposed modification of the prior art must have had a reasonable expectation of success, as determined from the vantage point of the artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1208, 18 U.S.P.Q.2d 1016, 1022-23 (Fed. Cir. 1991).
- c) The prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Alternatively, the

motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.*

Regardless of whether the USPTO relies on an express or an implicit showing of motivation, the USPTO is obligated to provide particular findings related to its conclusion, and those findings must be clear and particular. *Id.* A broad conclusionary statement, standing alone without support, is not “evidence.” *Id.*; *see also, In re Zurko*, 258 F.3d 1379, 1386, 59 U.S.P.Q.2d 1693, 1697-98 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000). Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.* Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d at 1316-1317 (*citing B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d 1314, 1318 (Fed. Cir. 1996)); *see also, Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (B. Pat. App. & Inter. 1985)) (“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.”).

Kirby fails to teach or suggest at least the defining the granularity and switching function of a plurality of subnodes, considering each subnode in a particular order corresponding to

reduce switching constraints and selecting all or part of the traffic of an incoming granularity and an outgoing granularity that satisfies the switching constraints of the subnode, as recited in claim 1. The Patent Office has not met its burden for a *prima facie* case of obviousness for several reasons. First, the Patent Office's definition of granularity is completely different than the definition of granularity contemplated in the present invention. The present invention recited in claim 1 defines granularity as differing levels of signal grouping for optical fibers, *i.e.*, wavelength level, band level, multi-band level and fiber level. *See, e.g.*, page 3, lines 22-32 of the instant specification. In the instant Office Action, the Patent Office mixes the electrical and optical signals of Kirby (*see* Fig. 2A) and claims that mixing of different types of signals represents granularity as contemplated by the present invention. This is contrary to the invention recited in claim 1, which is directed to switching subnodes in a monoblock wavelength division multiplex optical switching network. Figure 2A of Kirby makes it clear that the electronic switch and the optical switch are separate entities. Furthermore, it is well-settled that a patent applicant can be their own lexicographer, and in the context of the invention of claim 1, the specification makes it clear that granularity refers to the subdivision and grouping of optical signals, not electrical signals.

Second, even accepting *arguendo* that the Patent Office's definition of granularity somehow is applicable, nowhere in Kirby is there any teaching or suggestion of considering each subnode in a particular order corresponding to reduce switching constraints and selecting all or part of the traffic of an incoming granularity and an outgoing granularity that satisfies the switching constraints of the subnode, as recited in claim 1. While the Patent Office argues that

Kirby shows the discovering of network topology, the recitations of claim 1 clearly require more than a simple topology mapping. Critically, Figure 2A of Kirby shows the optical switch as one large block. There is no disclosure that the optical switch is decomposed into subnodes and there is no teaching or suggestion that this optical switch is any different from a conventional optical switch. For example, Kirby states at col. 6, lines 20-26:

Optical switch 205, on the other hand, is a slave device that directs data from optical inputs 230 to optical outputs 247 through flow paths based upon settings issued by optical switch control processor 210 rather than upon destination information encoded within the signals themselves.

If Kirby specifically discusses subnodes within its disclosure, Applicant requests that the Patent Office provide specific citations to Kirby that clearly illustrate that the switching constraints of the alleged subnodes in Kirby are considered in successive fashion. Furthermore, although the Patent Office argues that Kirby allegedly discloses the optimization of switching constraints by considering each subnode in a successive order, the only text pointed to by the Patent Office simply states that a particular flow path can be requested or that a flow path should be determined for routing WDM optical signals. No other text from Kirby is cited for this feature of the present invention. Applicant submits that the Patent Office's reasoning based on the alleged teachings of Kirby lacks the necessary showing of a suggestion or motivation to modify the teachings of that Kirby, and thus, *prima facie* obviousness based on Kirby cannot stand. Under *Ex parte Clapp*, the Patent Office must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Other than the statement that Kirby's hybrid switch nodes communicate to establish a flow path (between hybrid switch nodes and not between sub-nodes within a hybrid

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switch node), the Patent Office has not provided any further cogent reasoning as to why an artisan would have found the novel invention recited in claim 1 to have been obvious in light of the teachings of Kirby.

Based on the foregoing reasons, Applicant submits that Kirby fails to teach or suggest the present invention as recited in claim 1. Thus, Applicant submits that claim 1 is allowable, and further submits that claims 2 and 5 are allowable as well, at least by virtue of their dependency from claim 1. Applicant respectfully requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 1, 2 and 5.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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AMENDMENTS TO THE DRAWINGS

The Patent Office objects to Figure 1 as lacking a "PRIOR ART" legend. Applicant herein amends Figure 1 with a "PRIOR ART" legend and submits that the objection to Figure 1 has been overcome.

Attachment: Seven (7) Replacement Sheets